UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,676	08/01/2003	Gerald Johnson	D2993	2698

43471 7590 12/01/2006	EXAMINER	
GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.	TAYLOR, NICHOLAS R	
101 TOURNAMENT DRIVE	ART UNIT	PAPER NUMBER
HORSHAM, PA 19044	2141	

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/632,676	JOHNSON, GERALD
	Examiner	Art Unit	
	Nicholas R. Taylor	2141	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _30 August 2006_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10, 21 and 22_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10, 21 and 22_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _01 August 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _6/3/05 and 9/5/06_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-10, 21, and 22 have been presented for examination and are rejected.

Response to Arguments

2.   Applicant's arguments filed August 30th, 2006, have been fully considered but

they are deemed not persuasive.

3.   In the remarks, applicant argued in substance that:

        (A) Prior art of Oz does not teach transmitting timing critical data directly to a

media access control (MAC) layer or maintaining a timing relationship throughout the

MAC layer to a scheduler. Oz discussing moving packets, but if the packets are

received out of order they will remain in the same out of order sequence.

        As to point (A), the examiner cited to col. 20, lines 13-65 as teaching the

limitation "transmitting the timing critical data directly to a media access control layer" in

the previous office action. In the cited portion of Oz, timing critical data such as MPEG

transport packets are received over the network and transmitted directly to a media

access control layer (Oz, col. 3, line 52 to col. 4, line 5). The timing relationship of the

streams is maintained throughout transmission in Oz's system and errors are corrected

to help maintain this order in order to enable usable retransmissions (e.g., see col. 17,

lines 26-41 where the Program Clock Reference (PCR) field is re-stamped to correct for jitter and other delays that may affect the timing relationship).

(B) Prior art of Oz does not teach a MAC receiver, as the words are not used in col. 12, lines 14-21 and col. 21, lines 22-26 of Oz.

As to point (B), Oz teaches a video bridge that receives packets "over data channels, such as TCP/IP Ethernet communication lines" (col. 10, lines 49-53; see also col. 3, line 63 to col. 4, line 5). Ethernet is data link layer (level 2) protocol of the Open Systems Interconnection (OSI) model that uses MAC receiver/transmitters to communicate information.

(C) Prior art of Oz does not teach a decoder, as the word is not used in col. 11, lines 54-62 and element 132 of fig. 1 of Oz. Additionally, Oz does not teach a depacketizer, as the word is not used in col. 20, lines 14-65 of Oz.

As to point (C), Oz teaches a decoder coupled to a MAC receiver and a television that converts the timing critical data into a television signal (col. 11, lines 54-62, and specifically, the MAC layer conversion that takes place at elements 130 and 132 of fig.1). Oz further teaches a depacketizer for depacketizing streams in order to analyze and convert incoming packets to a destination format (e.g., see the depacketized analysis of fig. 9 or the explanation of col. 20, lines 34-65).

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1, 2, 4-7, 10, 21, and 22 are rejected under 35 U.S.C. 102(e) as being

anticipated by Oz et al. (U.S. Patent 6,434,141).

6.   As per claim 1, Oz teaches a method for transmitting timing critical data over a

network that is also carrying Internet Protocol traffic (Oz, col. 10, lines 43-53)

comprising:

transmitting the timing critical data directly to a media access control layer;

maintaining a timing relationship of the timing critical data throughout the media

access control layer to a scheduler; and (Oz, col. 20, lines 13-65)

scheduling transmission of the timing critical data by using information embedded

into the timing critical data (Oz, col. 10, lines 53-65; col. 21, lines 22-26 and fig. 9) and

the Internet Protocol traffic in a single scheduler (Oz, col. 10, lines 43-53).

7.   As per claim 2, Oz teaches the system further wherein the timing critical data

comprises an MPEG video data stream (Oz, col. 21, lines 27-41).

8.   As per claim 4, Oz teaches an apparatus to receive timing critical data from a first

network and to transmit the timing critical data over one or more other networks to one

or more client devices comprising:

        a video bridge to couple to the first network, said video bridge receiving the

timing critical data, maintaining a timing relationship of the timing critical data and (Oz,

col. 20, lines 13-65)

        scheduling transmission of the timing critical data over the one or more other

networks based upon information embedded into the timing critical data (Oz, col. 10,

lines 53-65; col. 21, lines 22-26 and fig. 9).

9.   As per claim 5, Oz teaches the system further wherein the video bridge

comprises:

        a MAC receiver outputting the timing critical data; and (Oz, col. 12, lines 14-21)

        one or more MAC transmitters, one for each of the one of more client devices,

each MAC transmitter coupled to the MAC receiver, receiving the timing critical data

and converting the timing critical data to a format suitable for transmission over one of

the one or more other networks (Oz, col. 21, lines 5-11; see also col. 20, lines 14-65).

10.   As per claim 6, Oz teaches the system further wherein the video bridge

comprises:

a first physical layer interface to couple to the first network and coupled to the

MAC receiver; and (Oz, col. 12, lines 14-21; see fig. 6, item 268)

one or more second physical layer interfaces, each second physical layer

interface coupled to one of the one or more MAC transmitters, and each second

physical layer interface to couple to said one of the one or more other networks Oz, col.

21, lines 5-11; fig. 6, item 278; fig. 8, items 316 and 318).

11.   As per claim 7, Oz teaches the system further wherein each of the one or more

MAC transmitters comprises:

a timing circuit to adjust timing resulting from any filtering and to add additional

timing information to adjust for latency and jitter introduced by said one of the one or

more other networks; (Oz, col. 17, lines 26-40)

a packetizer coupled to the timing circuit to create packets or frames that meet

requirements of said one of the one or more other networks; and (Oz, col. 20, lines 13-

65)

a scheduler coupled to the packetizer to schedule access to said one of the one

or more other networks (Oz, col. 10, lines 53-65; col. 21, lines 22-26 and fig. 9).

12.   As per claim 10, Oz teaches the system further wherein the one or more client

devices comprises at least two client devices, and the video bridge transmits an

identical copy of the timing critical data to each of the at least two client devices (Oz,

col. 18, lines 24-33).

13.   As per claim 21, Oz teaches an apparatus for transmitting timing critical data

from a first network over one or more other networks to one or more client devices

comprising:

        a video bridge coupled to the first network and receiving the timing critical data,

maintaining a timing relationship of the timing critical data, (Oz, col. 20, lines 13-65)

        scheduling transmission of the timing critical data over the one or more other

networks based upon information embedded in the timing critical data (Oz, col. 10, lines

53-65; col. 21, lines 22-26 and fig. 9),

        and outputting a television signal; and a television coupled to the video bridge to

receive the television signal from the video bridge (Oz, col. 11, lines 54-62 and e.g. fig.

1 item 132).

14.   As per claim 22, Oz teaches the system further wherein the video bridge

comprises:

        a MAC receiver outputting the timing critical data; (Oz, col. 21, lines 22-26 and

fig. 9)

        a decoder coupled to the MAC receiver and the television and converting the

timing critical data to a television signal; and (Oz, col. 11, lines 54-62 and e.g. fig. 1 item

132)

a MAC transmitter receiving the timing critical data and converting the timing

critical data to a format suitable for transmission over the network (Oz, col. 20, lines 13-

65).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oz et al.

(U.S. Patent 6,434,141), further in view of Thompson ("IEEE 1394: Changing the way

we do Multimedia Communications").

17. As per claim 3, Oz teaches the above, yet fails to further teach the system

wherein the timing critical data specifically comprises 1394 traffic including isochronous

video data. Thompson teaches using 1394 to transmit video data (Thompson, "Digital

Video" paragraph).

It would have been obvious to one of ordinary skill in the art, at the time the

invention was made, to have combined Thompson and Oz to provide the 1394 video

data transfer of Thompson in the system of Oz, because doing so would support the

high speed transfer of digital video data (Thompson, "Digital Video" paragraph).

18.   Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Oz et al. (U.S. Patent 6,434,141), further in view of Noronha et al. (U.S PGPub

2003/0223466).

19.   As per claim 8, Oz teaches the system further wherein each of the one or more

MAC transmitters comprises:

       a PID filter to receive the timing critical data and to filter out programs that are not

required by one of the one or more client devices and outputting the filtered timing

critical data to the timing circuit; and (Oz, col. 17, lines 4-14).

       However, Oz fails to teach a queue coupled to the scheduler to buffer packets or

frames prior to transmission over said one of the one or more other networks.

       Noronha teaches a multiplexing system for transport stream packets that uses a

queue to buffer packets (Noronha, abstract; paragraph 0063).

       It would have been obvious to one of ordinary skill in the art, at the time the

invention was made, to have combined Oz and Noronha to provide the packet system

of Noronha in the system of Oz, because doing so would provide Oz with a reusable

transport packet storage location for situations where the network isn't ready for new

packet transmission (Noronha, paragraph 0063).

20.   As per claim 9, Oz teaches the system further comprising one or more additional

MAC receivers, one for each of the one or more client devices, each of the one or more

additional MAC receivers disposed between one of the one or more other networks and

one of the one or more client devices, wherein each of the one or more additional MAC

receivers comprises:

a depacketizer to convert incoming packets to a format suitable for the timing

critical data; (Oz, col. 20, lines 14-65)

a timing circuit coupled to the depacketizer to restore the timing critical data

based on bits added by a timing circuit in the one or more MAC transmitters; and (Oz,

col. 17, lines 26-40).

However, Oz fails to teach a queue coupled to the depacketizer to buffer

incoming packets from said one of the one or more other networks before passing the

incoming packets to the depacketizer.

Noronha teaches a multiplexing system for transport stream packets that uses a

queue to buffer packets (Noronha, abstract; paragraph 0063).

It would have been obvious to one of ordinary skill in the art, at the time the

invention was made, to have combined Oz and Noronha to provide the packet system

of Noronha in the system of Oz; because doing so would provide Oz with a reusable

transport packet storage location for situations where the network isn't ready for new

packet transmission (Noronha, paragraph 0063).

Conclusion

21.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-

3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm,

with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number

for the organization where this application or proceeding is assigned is (703) 305-3718.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Nicholas Taylor
Examiner
Art Unit 2141

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